Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for creating a keyword string database on a wireless user device, the method comprising:

   determining one or more candidate keyword strings to store in the ~~said~~ database;

   for each of the ~~said~~ one or more candidate keyword strings, creating a single bit vector based at least in part on the ~~said~~ each of the ~~said~~ one or more candidate keyword strings, the ~~said~~ bit vector for use in comparing an input bit vector with the ~~said~~ bit vectors to indicate whether an input keyword string represented by the ~~said~~ input bit vector matches the ~~said~~ one or more candidate keyword strings, the ~~said~~ input keyword string provided by a user of the ~~said~~ wireless user device; and

   storing the ~~said~~ one or more bit vectors and a reference to the ~~said~~ one or more candidate keyword strings in the ~~said~~ database.

2. (Currently Amended) The method of claim 1 wherein the ~~said~~ bit vector further comprises at least one bit that represents a non-alphanumeric symbol.

3. (Currently Amended) The method of claim 2 wherein the ~~said~~ non-alphanumeric symbol indicates an email address.

4. (Currently Amended) The method of claim 2 wherein the ~~said~~ non-alphanumeric symbol indicates a mobile number.

5.   (Currently Amended) The method of claim 2 wherein the said non-alphanumeric symbol indicates a wired number.

6.   (Currently Amended) The method of claim 2 wherein the said non-alphanumeric symbol indicates a paper-mail address.

7.   (Currently Amended) The method of claim 2 wherein the said non-alphanumeric symbol indicates a cost ranking.

8.   (Currently Amended) The method of claim 2 wherein the said non-alphanumeric symbol indicates a quality ranking.

9.   (Currently Amended) The method of claim 2 wherein the said non-alphanumeric symbol indicates a cuisine.

10-12 (Cancelled)

13. (Currently Amended) A method for incremental keyword search on a wireless user device, the method comprising:

receiving from a user of the said wireless user device an input keyword string comprising one or more words comprising one or more symbols;

creating a single bit vector based at least in part on the said input keyword string;

comparing the said bit vector with one or more other bit vectors representing at least one candidate keyword string to create a set of matching bit vectors;

applying a conventional keyword matching algorithm to the ~~said~~ at least one candidate

keyword string represented by the ~~said~~ set of matching bit vectors; and

presenting any matching candidate keyword strings.

14. (Currently Amended) The method of claim 13, further comprising preempting the ~~said~~

method after a predetermined amount of time.

15. (Currently Amended) The method of claim 14 wherein the ~~said~~ predetermined amount of

time is two seconds.

16. (Currently Amended) The method of claim 13 wherein the ~~said~~ comparing is independent of

the order of keyword prefixes in keyword strings.

17. (Currently Amended) A method for creating a keyword string database on a wireless user

device, the method comprising:

determining one or more candidate keyword strings to store in the ~~said~~ database;

for each of the ~~said~~ one or more candidate keyword strings, creating a single bit vector based

at least in part on the ~~said~~ each of the ~~said~~ one or more candidate keyword strings, the

~~said~~ bit vector having a bit position for each symbol in an alphabet and having bits set

for bit positions corresponding to at least one symbol representing the first symbol of a

word in the ~~said~~ each of the ~~said~~ one or more candidate keyword strings, the ~~said~~ bit

vectors for use in comparing an input bit vector with the ~~said~~ bit vectors to indicate

whether an input keyword string represented by the ~~said~~ input bit vector matches the

~~said~~ one or more candidate keyword strings; and

storing the ~~said~~ one or more bit vectors and a reference to the ~~said~~ one or more candidate

keyword strings in the ~~said~~ database.

18-20   (Cancelled)

21. (Currently Amended) A method for incremental keyword search on a wireless user device,

the method comprising:

receiving from a user of the ~~said~~ wireless user device an input keyword string comprising

one or more words comprising one or more symbols;

creating a single bit vector based at least in part on the ~~said~~ input keyword string, the ~~said~~ bit

vector having a bit position for each symbol in an alphabet and having bits set for

positions corresponding to at least one symbol representing the first symbol of a word in

the ~~said~~ input keyword string;

comparing the ~~said~~ bit vector with one or more other bit vectors representing at least one

candidate keyword string to create a set of matching bit vectors;

applying a conventional keyword matching algorithm to the ~~said~~ at least one candidate

keyword string represented by the ~~said~~ set of matching bit vectors; and

presenting any matching candidate keyword strings.

22. (Currently Amended) The method of claim 21, further comprising preempting the ~~said~~

method after a predetermined amount of time.

23. (Currently Amended) The method of claim 22 wherein the ~~said~~ predetermined amount of

time is two seconds.

24. (Currently Amended) The method of claim 21 wherein the said comparing is independent of the order of keyword prefixes in keyword strings.

25. (Currently Amended) A method for comparing keyword strings on a wireless user device, the method comprising:

determining a relative frequency of use for at least one symbol in a language;

assigning a statistical weighting to the said at least one symbol based at least in part on a relative frequency of use of the said at least one symbol;

assigning each of the said at least one symbol to one of a plurality of groups;

comparing a first keyword string and a second keyword string based at least in part on whether at least one symbol of the said first keyword string is assigned to the same group as at least one corresponding symbol of the said second keyword string; and

presenting a result of the said comparing to a user of the said wireless user device.

26. (Currently Amended) The method of claim 25 wherein the said assigning further comprises assigning each of the said at least one symbol to one of a plurality of groups so as to minimize the difference between the sums of statistical weightings for symbols comprising each group in the said plurality of groups.

27. (Currently Amended) The method of claim 25 wherein the said relative frequency of use comprises the relative frequency of use of symbols in the first character of words in the said language.

28. (Currently Amended) A method for creating a keyword string database on a wireless user device, the method comprising:

determining one or more candidate keyword strings to store in the said database;

creating one or more bit vectors based at least in part on the said one or more candidate

keyword strings, each bit of the said one or more bit vectors corresponding to one or

more symbols in an alphabet, bits having a bit position corresponding to the first

symbol of a word in the said one or more candidate keyword strings being set, the said

one or more bit vectors for use in comparing an input bit vector with the said one or

more bit vectors to indicate whether an input keyword string represented by the said

input bit vector matches the said one or more candidate keyword strings; and

storing the said one or more bit vectors and a reference to the said one or more candidate

keyword strings in the said database.

29-31 (Cancelled)

32. (Currently Amended) A method for incremental keyword search on a wireless user device,

the method comprising:

receiving from a user of the said wireless user device an input keyword string comprising

one or more words comprising one or more symbols, each symbol representing the first

symbol of a word in a search string;

creating a single bit vector based at least in part on the said input keyword string, each bit

corresponding to one or more symbols in an alphabet, bits having a bit position

corresponding to the said one or more symbols being set;

comparing the said bit vector with one or more other bit vectors representing at least one

candidate keyword string to create a set of matching bit vectors;

applying a conventional keyword matching algorithm to the said at least one candidate

keyword string represented by the said set of matching bit vectors; and

presenting any matching candidate keyword strings.

33. (Currently Amended) The method of claim 32, further comprising preempting the ~~said~~ method after a predetermined amount of time.

34. (Currently Amended) The method of claim 33 wherein the ~~said~~ predetermined amount of time is two seconds.

35. (Currently Amended) The method of claim 32 wherein the ~~said~~ comparing is independent of the order of keyword prefixes in keyword strings.

36. (Currently Amended) A method for creating a keyword string database on a wireless user device, the method comprising:

determining one or more candidate keyword strings to store in the ~~said~~ database;

creating one or more bit vectors based at least in part on the ~~said~~ one or more candidate keyword strings, each bit of the ~~said~~ one or bit vector corresponding to one or more symbols in an alphabet, bits having a bit position corresponding to a symbol of a prefix of a word in the ~~said~~ one or more candidate keyword strings being set, the ~~said~~ one or more bit vectors for use in comparing an input bit vector with the ~~said~~ one or more bit vectors to indicate whether an input keyword string represented by the ~~said~~ input bit vector matches the ~~said~~ one or more candidate keyword strings; and

storing the ~~said~~ one or more bit vectors and a reference to the ~~said~~ one or more candidate keyword strings in the ~~said~~ database.

37-39. (Cancelled)

40. (Currently Amended) A method for incremental keyword search on a wireless user device, the method comprising:

receiving from a user of the said wireless user device an input keyword string comprising one or more words comprising one or more symbols;

creating a single bit vector based at least in part on the said input keyword string, each bit corresponding to one or more symbols in an alphabet, bits having a bit position corresponding to a prefix of a word in the said one or more symbols being set;

comparing the said bit vector with one or more other bit vectors representing at least one candidate keyword string to create a set of matching bit vectors;

applying a conventional keyword matching algorithm to the said at least one candidate keyword string represented by the said set of matching bit vectors; and

presenting any matching candidate keyword strings.

41. (Currently Amended) The method of claim 40, further comprising preempting the said method after a predetermined amount of time.

42. (Currently Amended) The method of claim 41 wherein the said predetermined amount of time is two seconds.

43. (Currently Amended) The method of claim 40 wherein the said comparing is independent of the order of keyword prefixes in keyword strings.

44. (Currently Amended) A method for incremental keyword search on a wireless user device, the method comprising:

receiving from a user of the said wireless user device an input keyword string comprising

one or more words comprising one or more symbols, each symbol representing the first

symbol of a word in a search string;

receiving a hierarchy, elements of the said hierarchy comprising intermediate nodes and leaf

nodes representing one or more keyword strings comprising one or more words

comprising one or more symbols;

creating hierarchy bit vectors corresponding to the said one or more keyword strings in the

said hierarchy;

searching the said hierarchy bit vectors for a match with the said input keyword string, the

said searching comprising, for each of the said elements of the said hierarchy:

saving the said input keyword string;

applying a logical "AND" operation to the bit vector of the element and a bit vector based at

least in part on the said input keyword string, the said applying producing a result;

if the said result is nonzero, removing from the said input keyword string any words in the

said input keyword string that are prefixes of words in the element;

if the said input keyword string is empty, adding the said element to a list of matched items;

and

restoring the said input keyword string; and

rendering the said list of matched items.

45. (Currently Amended) A method for creating a keyword string database on a wireless user

device, the method comprising:

step for determining one or more candidate keyword strings to store in the said database;

step for, for each of the said one or more candidate keyword strings, creating a single bit

vector based at least in part on the said each of the said one or more candidate keyword

strings, the said bit vector for use in comparing an input bit vector with the said bit

vector to indicate whether an input keyword string represented by the said input bit

vector matches the said one or more candidate keyword strings, the said input keyword

string provided by a user of the said wireless user device; and

step for storing the said one or more bit vectors and a reference to the said one or more

candidate keyword strings in the said database.

46. (Currently Amended) The method of claim 45 wherein the said bit vector further comprises

at least one bit that represents a non-alphanumeric symbol.

47. (Currently Amended) The method of claim 46 wherein the said non-alphanumeric symbol

indicates an email address.

48. (Currently Amended) The method of claim 46 wherein the said non-alphanumeric symbol

indicates a mobile number.

49. (Currently Amended) The method of claim 46 wherein the said non-alphanumeric symbol

indicates a wired number.

50. (Currently Amended) The method of claim 46 wherein the said non-alphanumeric symbol

indicates a paper-mail address.

51. (Currently Amended) The method of claim 46 wherein the said non-alphanumeric symbol

indicates a cost ranking.

52. (Currently Amended) The method of claim 46 wherein the said non-alphanumeric symbol indicates a quality ranking.

53. (Currently Amended) The method of claim 46 wherein the said non-alphanumeric symbol indicates a cuisine.

54-56 (Cancelled)

57. (Currently Amended) A method for incremental keyword search on a wireless user device, the method comprising:

    step for receiving from a user of the said wireless user device an input keyword string comprising one or more words comprising one or more symbols;

    step for creating a single bit vector based at least in part on the said input keyword string;

    step for comparing the said bit vector with one or more other bit vectors representing at least one candidate keyword string to create a set of matching bit vectors;

    step for applying a conventional keyword matching algorithm to the said at least one candidate keyword string represented by the said set of matching bit vectors; and

    step for presenting any matching candidate keyword strings.

58. (Currently Amended) The method of claim 57, further comprising step for preempting the said method after a predetermined amount of time.

59. (Currently Amended) The method of claim 58 wherein the said predetermined amount of time is two seconds.

60. (Currently Amended) The method of claim 57 wherein the said comparing is independent of the order of keyword prefixes in keyword strings.

61. (Currently Amended) A method for creating a keyword string database on a wireless user device, the method comprising:

step for determining one or more candidate keyword strings to store in the said database;

step for, for each of the said one or more candidate keyword strings, creating a single bit vector based at least in part on the said each of the said one or more candidate keyword strings, the said bit vector having a bit position for each symbol in an alphabet and having bits set for bit positions corresponding to at least one symbol representing the first symbol of a word in the said each of the said one or more candidate keyword strings, the said bit vectors for use in comparing an input bit vector with the said bit vectors to indicate whether an input keyword string represented by the said input bit vector matches the said one or more candidate keyword strings; and

step for storing the said one or more bit vectors and a reference to the said one or more candidate keyword strings in the said database.

62-64. (Cancelled)

65. (Currently Amended) A method for incremental keyword search on a wireless user device, the method comprising:

step for receiving from a user of the said wireless user device an input keyword string comprising one or more words comprising one or more symbols;

step for creating a single bit vector based at least in part on the said input keyword string, the said bit vector having a bit position for each symbol in an alphabet and having bits set

for positions corresponding to at least one symbol representing the first symbol of a

word in the said input keyword string;

step for comparing the said bit vector with one or more other bit vectors representing at least

one candidate keyword string to create a set of matching bit vectors;

step for applying a conventional keyword matching algorithm to the said at least one

candidate keyword string represented by the said set of matching bit vectors; and

step for presenting any matching candidate keyword strings.

66. (Currently Amended) The method of claim 65, further comprising step for preempting the

said method after a predetermined amount of time.

67. (Currently Amended) The method of claim 66 wherein the said predetermined amount of

time is two seconds.

68. (Currently Amended) The method of claim 65 wherein the said comparing is independent of

the order of keyword prefixes in keyword strings.

69. (Currently Amended) A method for comparing keyword strings on a wireless user device,

the method comprising:

step for determining a relative frequency of use for at least one symbol in a language;

step for assigning a statistical weighting to the said at least one symbol based at least in part

on a relative frequency of use of the said at least one symbol;

step for assigning each of the said at least one symbol to one of a plurality of groups; and

step for comparing a first keyword string and a second keyword string based at least in part

on whether at least one symbol of the said first keyword string is assigned to the same

group as at least one corresponding symbol of the said second keyword string; and

step for presenting a result of the said comparing to a user of the said wireless user device.

70. (Currently Amended) The method of claim 69 wherein the said step for assigning further

comprises step for assigning each of the said at least one symbol to one of a plurality of

groups so as to minimize the difference between the sums of statistical weightings for

symbols comprising each group in the said plurality of groups.

71. (Currently Amended) The method of claim 69 wherein the said relative frequency of use

comprises the relative frequency of use of symbols in the first character of words in the said

language.

72. (Currently Amended) A method for creating a keyword string database on a wireless user

device, the method comprising:

step for determining one or more candidate keyword strings to store in the said database;

step for creating one or more bit vectors based at least in part on the said one or more

candidate keyword strings, each bit of the said one or more bit vectors corresponding to

one or more symbols in an alphabet, bits having a bit position corresponding to the first

symbol of a word in the said one or more candidate keyword strings being set, the said

one or more bit vectors for use in comparing an input bit vector with the said one or

more bit vectors to indicate whether an input keyword string represented by the said

input bit vector matches the said one or more candidate keyword strings; and

step for storing the said one or more bit vectors and a reference to the said one or more

candidate keyword strings in the said database.

73-75 (Cancelled)

76. (Currently Amended) A method for incremental keyword search on a wireless user device,

the method comprising:

step for receiving from a user of the said wireless user device an input keyword string

comprising one or more words comprising one or more symbols, each symbol

representing the first symbol of a word in a search string;

step for creating a single bit vector based at least in part on the said input keyword string,

each bit corresponding to one or more symbols in an alphabet, bits having a bit position

corresponding to the said one or more symbols being set;

step for comparing the said bit vector with one or more other bit vectors representing at least

one candidate keyword string to create a set of matching bit vectors;

step for applying a conventional keyword matching algorithm to the said at least one

candidate keyword string represented by the said set of matching bit vectors; and

step for presenting any matching candidate keyword strings.

77. (Currently Amended) The method of claim 76, further comprising step for preempting the

said method after a predetermined amount of time.

78. (Currently Amended) The method of claim 77 wherein the said predetermined amount of

time is two seconds.

79. (Currently Amended) The method of claim 76 wherein the said comparing is independent of the order of keyword prefixes in keyword strings.

80. (Currently Amended) A method for creating a keyword string database on a wireless user device, the method comprising:

step for determining one or more candidate keyword strings to store in the said database;

step for creating one or more bit vectors based at least in part on the said one or more candidate keyword strings, each bit of the said one or bit vector corresponding to one or more symbols in an alphabet, bits having a bit position corresponding to a symbol of a prefix of a word in the said one or more candidate keyword strings being set, the said one or more bit vectors for use in comparing an input bit vector with the said one or more bit vectors to indicate whether an input keyword string represented by the said input bit vector matches the said one or more candidate keyword strings; and

step for storing the said one or more bit vectors and a reference to the said one or more candidate keyword strings in the said database.

81-83. (Cancelled)

84. (Currently Amended) A method for incremental keyword search on a wireless user device, the method comprising:

step for receiving from a user of the said wireless user device an input keyword string comprising one or more words comprising one or more symbols;

step for creating a single bit vector based at least in part on the ~~said~~ input keyword string,

each bit corresponding to one or more symbols in an alphabet, bits having a bit position

corresponding to a prefix of a word in the ~~said~~ one or more symbols being set;

step for comparing the ~~said~~ bit vector with one or more other bit vectors representing at least

one candidate keyword string to create a set of matching bit vectors;

step for applying a conventional keyword matching algorithm to the ~~said~~ at least one

candidate keyword string represented by the ~~said~~ set of matching bit vectors; and

step for presenting any matching candidate keyword strings.

85. (Currently Amended) The method of claim 84, further comprising step for preempting said

method after a predetermined amount of time.

86. (Currently Amended) The method of claim 85 wherein the ~~said~~ predetermined amount of

time is two seconds.

87. (Currently Amended) The method of claim 84 wherein the ~~aid~~ comparing is independent of

the order of keyword prefixes in keyword strings.

88. (Currently Amended) A method for incremental keyword search on a wireless user device,

the method comprising:

step for receiving from a user of the ~~said~~ wireless user device an input keyword string

comprising one or more words comprising one or more symbols, each symbol

representing the first symbol of a word in a search string;

step for receiving a hierarchy, elements of the said hierarchy comprising intermediate nodes and leaf nodes representing one or more keyword strings comprising one or more words comprising one or more symbols;

step for creating hierarchy bit vectors corresponding to the said one or more keyword strings in the said hierarchy;

step for searching the said hierarchy bit vectors for a match with the said input keyword string, the said step for searching comprising, for each of the said elements of the said hierarchy:

step for saving the said input keyword string;

step for applying a logical

"AND" operation to the bit vector of the element and a bit vector based at least in part on the said input keyword string, the said applying producing a result;

step for if the said result is nonzero, removing from the said input keyword string any words in the said input keyword string that are prefixes of words in the element;

step for if the said input keyword string is empty, adding the said element to a list of matched items; and

step for restoring the said input keyword string; and

step for rendering the said list of matched items.

89. (Currently Amended) A program storage device readable by a machine, embodying a program of instructions executable by the machine to perform a method for creating a keyword string database on a wireless user device, the method comprising:

determining one or more candidate keyword strings to store in the said database;

for each of the said one or more candidate keyword strings, creating a single bit vector based at least in part on the said each of the said one or more candidate keyword strings, the

said bit vectors for use in comparing an input bit vector with the said bit vectors to

indicate whether an input keyword string represented by the said input bit vector

matches the said one or more candidate keyword strings, the said input keyword string

provided by a user of the said wireless user device; and

storing the said one or more bit vectors and a reference to the said one or more candidate

keyword strings in the said database.

90. (Currently Amended) The program storage device of claim 89 wherein the said bit vector

further comprises at least one bit that represents a non-alphanumeric symbol.

91. (Currently Amended) The program storage device of claim 90 wherein the said non-

alphanumeric symbol indicates an email address.

92. (Currently Amended) The program storage device of claim 90 wherein the said non-

alphanumeric symbol indicates a mobile number.

93. (Currently Amended) The program storage device of claim 90 wherein the said non-

alphanumeric symbol indicates a wired number.

94. (Currently Amended) The program storage device of claim 90 wherein the said non-

alphanumeric symbol indicates a paper-mail address.

95. (Currently Amended) The program storage device of claim 90 wherein the said non-

alphanumeric symbol indicates a cost ranking.

96. (Currently Amended) The program storage device of claim 90 wherein ~~the~~ said non-
alphanumeric symbol indicates a quality ranking.

97. (Currently Amended) The program storage device of claim 90 wherein ~~the~~ said non-
alphanumeric symbol indicates a cuisine.

98-100 (Cancelled)

101.   (Currently Amended) A program storage device readable by a machine, embodying a
program of instructions executable by the machine to perform a method for incremental
keyword search on a wireless user device, the method comprising:
receiving from a user of the ~~said~~ wireless user device an input keyword string comprising
one or more words comprising one or more symbols;
creating a single bit vector based at least in part on the ~~said~~ input keyword string;
comparing the ~~said~~ bit vector with one or more other bit vectors representing at least one
candidate keyword string to create a set of matching bit vectors;
applying a conventional keyword matching algorithm to the ~~said~~ at least one candidate
keyword string represented by the ~~said~~ set of matching bit vectors; and
presenting any matching candidate keyword strings.

102.   (Currently Amended) The program storage device of claim 101 wherein the ~~said~~ method
further comprises preempting the ~~said~~ method after a predetermined amount of time.

103.   (Currently Amended) The program storage device of claim 102 wherein the ~~said~~
predetermined amount of time is two seconds.

104.   (Currently Amended) The program storage device of claim 101 wherein the said

comparing is independent of the order of keyword prefixes in keyword strings.

105.   (Currently Amended) A program storage device readable by a machine, embodying a

program of instructions executable by the machine to perform a method for creating a

keyword string database on a wireless user device, the method comprising:

determining one or more candidate keyword strings to store in the said database;

for each of the said one or more candidate keyword strings, creating a single bit vector based

at least in part on the said each of the said one or more candidate keyword strings, the

said bit vector having a bit position for each symbol in an alphabet and having bits set

for bit positions corresponding to at least one symbol representing the first symbol of a

word in the said each of the said one or more candidate keyword strings, the said bit

vectors for use in comparing an input bit vector with the said bit vectors to indicate

whether an input keyword string represented by the said input bit vector matches the

said one or more candidate keyword strings; and

storing the said one or more bit vectors and a reference to the said one or more candidate

keyword strings in the said database.

106.   (Currently Amended) A program storage device readable by a machine, embodying a

program of instructions executable by the machine to perform a method for incremental

keyword search on a wireless user device, the method comprising:

submitting to the said wireless user device an input keyword string comprising one or more

words comprising one or more symbols; and

receiving in response to the said submitting at least one candidate keyword string where the first symbol of at least one word in each of the said at least one candidate keyword string matches the first symbol of the corresponding word in the said input keyword string.

107. (Currently Amended) The program storage device of claim 106 wherein the said method further comprises preempting the said method after a predetermined amount of time.

108. (Currently Amended) The program storage device of claim 107 wherein the said predetermined amount of time is two seconds.

109. (Currently Amended) A program storage device readable by a machine, embodying a program of instructions executable by the machine to perform a method for incremental keyword search on a wireless user device, the method comprising:

receiving from a user of the said wireless user device an input keyword string comprising one or more words comprising one or more symbols;

creating a single bit vector based at least in part on the said input keyword string, said bit vector having a bit position for each symbol in an alphabet and having bits set for positions corresponding to at least one symbol representing the first symbol of a word in the said input keyword string;

comparing the said bit vector with one or more other bit vectors representing at least one candidate keyword string to create a set of matching bit vectors;

applying a conventional keyword matching algorithm to the said at least one candidate keyword string represented by the said set of matching bit vectors; and

presenting any matching candidate keyword strings.

110.   (Currently Amended) The program storage device of claim 109 wherein the said method

further comprises preempting the said method after a predetermined amount of time.

111.   (Currently Amended) The program storage device of claim 110 wherein the said

predetermined amount of time is two seconds.

112.   (Currently Amended) The program storage device of claim 109 wherein the said

comparing is independent of the order of keyword prefixes in keyword strings.

113.   (Currently Amended) A program storage device readable by a machine, embodying a

program of instructions executable by the machine to perform a method for comparing

keyword strings on a wireless user device, the method comprising:

determining a relative frequency of use for at least one symbol in a language;

assigning a statistical weighting to the said at least one symbol based at least in part on a

relative frequency of use of the said at least one symbol;

assigning each of the said at least one symbol to one of a plurality of groups; and

comparing a first keyword string and a second keyword string based at least in part on

whether at least one symbol of the said first keyword string is assigned to the same

group as at least one corresponding symbol of the said second keyword string.

114.   (Currently Amended) The program storage device of claim 113 wherein the said

assigning further comprises assigning each of the said at least one symbol to one of a

plurality of groups so as to minimize the difference between the sums of statistical

weightings for symbols comprising each group in the said plurality of groups.

115. (Currently Amended) The program storage device of claim 113 wherein the said relative frequency of use comprises the relative frequency of use of symbols in the first character of words in the said language.

116. (Currently Amended) A program storage device readable by a machine, embodying a program of instructions executable by the machine to perform a method for creating a keyword string database on a wireless user device, the method comprising:

determining one or more candidate keyword strings to store in the said database;

creating one or more bit vectors based at least in part on the said one or more candidate keyword strings, each bit of the said one or more bit vectors corresponding to one or more symbols in an alphabet, bits having a bit position corresponding to the first symbol of a word in the said one or more candidate keyword strings being set, the said one or more bit vectors for use in comparing an input bit vector with the said one or more bit vectors to indicate whether an input keyword string represented by the said input bit vector matches the said one or more candidate keyword strings; and

storing the said one or more bit vectors and a reference to the said one or more candidate keyword strings in the said database.

117-119 (Cancelled)

120. (Currently Amended) A program storage device readable by a machine, embodying a program of instructions executable by the machine to perform a method for incremental keyword search on a wireless user device, the method comprising:

receiving from a user of the said wireless user device an input keyword string comprising

> one or more words comprising one or more symbols, each symbol representing the first

> symbol of a word in a search string;

creating a single bit vector based at least in part on the said input keyword string, each bit

> corresponding to one or more symbols in an alphabet, bits having a bit position

> corresponding to the said one or more symbols being set;

comparing the said bit vector with one or more other bit vectors representing at least one

> candidate keyword string to create a set of matching bit vectors;

applying a conventional keyword matching algorithm to the said at least one candidate

> keyword string represented by the said set of matching bit vectors; and

presenting any matching candidate keyword strings.

121.   (Currently Amended) The program storage device of claim 120 wherein the said method

> further comprises preempting the said method after a predetermined amount of time.

122.   (Currently Amended) The program storage device of claim 121 wherein the said

> predetermined amount of time is two seconds.

123.   (Currently Amended) The program storage device of claim 120 wherein the said

> comparing is independent of the order of keyword prefixes in keyword strings.

124.   (Currently Amended) A program storage device readable by a machine, embodying a

> program of instructions executable by the machine to perform a method for creating a

> keyword string database on a wireless user device, the method comprising:

> determining one or more candidate keyword strings to store in the said database;

creating one or more bit vectors based at least in part on the said one or more candidate

keyword strings, each bit of the said one or bit vector corresponding to one or more

symbols in an alphabet, bits having a bit position corresponding to a symbol of a prefix

of a word in the said one or more candidate keyword strings being set, the said one or

more bit vectors for use in comparing an input bit vector with the said one or more bit

vectors to indicate whether an input keyword string represented by the said input bit

vector matches the said one or more candidate keyword strings; and

storing the said one or more bit vectors and a reference to the said one or more candidate

keyword strings in the said database.

125.   (Currently Amended) A program storage device readable by a machine, embodying a

program of instructions executable by the machine to perform a method for incremental

keyword search on a wireless user device, the method comprising:

submitting an input keyword string comprising one or more words comprising one or more

symbols; and

receiving in response to the said submitting at least one candidate keyword string where a

prefix of a word of a matching candidate keyword string comprises at least one symbol

that belongs to the same symbol group as the corresponding symbol of the

corresponding word in the said input keyword string.

126.   (Currently Amended) The program storage device of claim 125 wherein the said method

further comprises preempting the said method after a predetermined amount of time.

127.   (Currently Amended) The program storage device of claim 126 wherein the said

predetermined amount of time is two seconds.

128.   (Currently Amended) A program storage device readable by a machine, embodying a

program of instructions executable by the machine to perform a method for incremental

keyword search on a wireless user device, the method comprising:

receiving from a user of the said wireless user device an input keyword string comprising

one or more words comprising one or more symbols;

creating a single bit vector based at least in part on the said input keyword string, each bit

corresponding to one or more symbols in an alphabet, bits having a bit position

corresponding to a prefix of a word in the said one or more symbols being set;

comparing the said bit vector with one or more other bit vectors representing at least one

candidate keyword string to create a set of matching bit vectors;

applying a conventional keyword matching algorithm to the said at least one candidate

keyword string represented by the said set of matching bit vectors; and

presenting any matching candidate keyword strings.

129.   (Currently Amended) The program storage device of claim 128 wherein the said method

further comprises preempting the said method after a predetermined amount of time.

130.   (Currently Amended) The program storage device of claim 129 wherein the said

predetermined amount of time is two seconds.

131.   (Currently Amended) The program storage device of claim 128 wherein the said

comparing is independent of the order of keyword prefixes in keyword strings.

132.   (Currently Amended) A program storage device readable by a machine, embodying a

program of instructions executable by the machine to perform a method for incremental

keyword search on a wireless user device, the method comprising:

receiving from a user of the ~~said~~ wireless user device an input keyword string comprising

one or more words comprising one or more symbols, each symbol representing the first

symbol of a word in a search string;

receiving a hierarchy, elements of the ~~said~~ hierarchy comprising intermediate nodes and leaf

nodes representing one or more keyword strings comprising one or more words

comprising one or more symbols;

creating hierarchy bit vectors corresponding to the ~~said~~ one or more keyword strings in the

~~said~~ hierarchy;

searching the ~~said~~ hierarchy bit vectors for a match with the ~~said~~ input keyword string, the

~~said~~ searching comprising, for each of the ~~said~~ elements of the ~~said~~ hierarchy:

saving the ~~said~~ input keyword string;

applying a logical "AND" operation to the bit vector of the element and a bit vector based at

least in part on the ~~said~~ input keyword string, the ~~said~~ applying producing a result;

if the ~~said~~ result is nonzero, removing from the ~~said~~ input keyword string any words in the

~~said~~ input keyword string that are prefixes of words in the element;

if the ~~said~~ input keyword string is empty, adding the ~~said~~ element to a list of matched items;

and

restoring the ~~said~~ input keyword string; and

rendering the ~~said~~ list of matched items.

133.   (Currently Amended) An apparatus for creating a keyword string database on a wireless

user device, the apparatus comprising:

means for determining one or more candidate keyword strings to store in the said database;

means for, for each of the said one or more candidate keyword strings, creating a single bit vector based at least in part on the said each of the said one or more candidate keyword strings, the said bit vectors for use in comparing an input bit vector with the said bit vectors to indicate whether an input keyword string represented by the said input bit vector matches the said one or more candidate keyword strings, the said input keyword string provided by a user of the said wireless user device; and

means for storing the said one or more bit vectors and a reference to the said one or more candidate keyword strings in the said database.

134.   (Currently Amended) The apparatus of claim 133 wherein the said bit vector further comprises at least one bit that represents a non-alphanumeric symbol.

135.   (Currently Amended) The apparatus of claim 134 wherein the said non-alphanumeric symbol indicates an email address.

136.   (Currently Amended) The apparatus of claim 134 wherein the said non-alphanumeric symbol indicates a mobile number.

137.   (Currently Amended) The apparatus of claim 134 wherein the said non-alphanumeric symbol indicates a wired number.

138.   (Currently Amended) The apparatus of claim 134 wherein the said non-alphanumeric symbol indicates a paper-mail address.

139. (Currently Amended) The apparatus of claim 134 wherein the said non-alphanumeric symbol indicates a cost ranking.

140. (Currently Amended) The apparatus of claim 134 wherein the said non-alphanumeric symbol indicates a quality ranking.

141. (Currently Amended) The apparatus of claim 134 wherein the said non-alphanumeric symbol indicates a cuisine.

142. (Currently Amended) An apparatus for incremental keyword search on a wireless user device, the apparatus comprising:

means for receiving from a user of the said wireless user device an input keyword string comprising one or more words comprising one or more symbols;

means for creating a single bit vector based at least in part on the said input keyword string;

means for comparing the said bit vector with one or more other bit vectors representing at least one candidate keyword string to create a set of matching bit vectors;

means for applying a conventional keyword matching algorithm to the said at least one candidate keyword string represented by the said set of matching bit vectors; and

means for presenting any matching candidate keyword strings.

143. (Currently Amended) The apparatus of claim 142, further comprising means for preempting the said receiving, the said creating, the said comparing, the said applying and the said presenting after a predetermined amount of time.

144. (Currently Amended) The apparatus of claim 143 wherein the said predetermined amount of time is two seconds.

145. (Currently Amended) The apparatus of claim 142 wherein the said comparing is independent of the order of keyword prefixes in keyword strings.

146. (Currently Amended) An apparatus for creating a keyword string database on a wireless user device, the apparatus comprising:

means for determining one or more candidate keyword strings to store in the said database;

means for, for each of the said one or more candidate keyword strings, creating a single bit vector based at least in part on the said each of the said one or more candidate keyword strings, the said bit vector having a bit position for each symbol in an alphabet and having bits set for bit positions corresponding to at least one symbol representing the first symbol of a word in the said each of the said one or more candidate keyword strings, the said bit vectors for use in comparing an input bit vector with the said bit vectors to indicate whether an input keyword string represented by the said input bit vector matches the said one or more candidate keyword strings; and

means for storing the said one or more bit vectors and a reference to the said one or more candidate keyword strings in the said database.

147. (Currently Amended) An apparatus for incremental keyword search on a resource-constrained device, the apparatus comprising:

means for receiving from a user of the said wireless user device an input keyword string comprising one or more words comprising one or more symbols;

means for creating a single bit vector based at least in part on the said input keyword string, the said bit vector having a bit position for each symbol in an alphabet and having bits set for positions corresponding to at least one symbol representing the first symbol of a word in the said input keyword string;

means for comparing the said bit vector with one or more other bit vectors representing at least one candidate keyword string to create a set of matching bit vectors;

means for applying a conventional keyword matching algorithm to the said at least one candidate keyword string represented by the said set of matching bit vectors; and

means for presenting any matching candidate keyword strings.

148.   (Currently Amended) The apparatus of claim 147, further comprising means for preempting the said receiving, the said creating, the said comparing, the said applying and the said presenting after a predetermined amount of time.

149.   (Currently Amended) The apparatus of claim 148 wherein the said predetermined amount of time is two seconds.

150.   (Currently Amended) The apparatus of claim 147 wherein the said comparing is independent of the order of keyword prefixes in keyword strings.

151.   (Currently Amended) An apparatus for comparing keyword strings on a wireless user device, the apparatus comprising:

means for determining a relative frequency of use for at least one symbol in a language;

means for assigning a statistical weighting to the said at least one symbol based at least in part on a relative frequency of use of the said at least one symbol;

means for assigning each of the said at least one symbol to one of a plurality of groups; and

means for comparing a first keyword string and a second keyword string based at least in

part on whether at least one symbol of the said first keyword string is assigned to the

same group as at least one corresponding symbol of the said second keyword string.

152.   (Currently Amended) The apparatus of claim 151 wherein the said means for assigning

further comprises means for assigning each of the said at least one symbol to one of a

plurality of groups so as to minimize the difference between the sums of statistical

weightings for symbols comprising each group in the said plurality of groups.

153.   (Currently Amended) The apparatus of claim 151 wherein the said relative frequency of

use comprises the relative frequency of use of symbols in the first character of words in the

said language.

154.   (Currently Amended) An apparatus for creating a keyword string database on a wireless

user device, the apparatus comprising:

means for determining one or more candidate keyword strings to store in said database;

means for creating one or more bit vectors based at least in part on said one or more

candidate keyword strings, each bit of the said one or more bit vectors corresponding to

one or more symbols in an alphabet, bits having a bit position corresponding to the first

symbol of a word in the said one or more candidate keyword strings being set, the said

one or more bit vectors for use in comparing an input bit vector with the said one or

more bit vectors to indicate whether an input keyword string represented by the said

input bit vector matches the said one or more candidate keyword strings; and

means for storing ~~the~~ said one or more bit vectors and a reference to ~~the~~ said one or more

candidate keyword strings in ~~the~~ said database.

155.   (Currently Amended) An apparatus for incremental keyword search on a wireless user

device, the apparatus comprising:

means for receiving from a user of ~~the~~ said wireless user device an input keyword string

comprising one or more words comprising one or more symbols, each symbol

representing the first symbol of a word in a search string;

means for creating a single bit vector based at least in part on ~~the~~ said input keyword string,

each bit corresponding to one or more symbols in an alphabet, bits having a bit position

corresponding to ~~the~~ said one or more symbols being set;

means for comparing ~~the~~ said bit vector with one or more other bit vectors representing at

least one candidate keyword string to create a set of matching bit vectors;

means for applying a conventional keyword matching algorithm to ~~the~~ said at least one

candidate keyword string represented by ~~the~~ said set of matching bit vectors; and

means for presenting any matching candidate keyword strings.

156.   (Currently Amended) The apparatus of claim 155, further comprising means for

preempting ~~the~~ said receiving, ~~the~~ said creating, ~~the~~ said comparing, ~~the~~ said applying and

said presenting after a predetermined amount of time.

157.   (Currently Amended) The apparatus of claim 156 wherein said predetermined amount of

time is two seconds.

158. (Currently Amended) The apparatus of claim 155 wherein the said comparing is independent of the order of keyword prefixes in keyword strings.

159. (Currently Amended) An apparatus for creating a keyword string database on a wireless user device, the apparatus comprising:

means for determining one or more candidate keyword strings to store in the said database;

means for creating one or more bit vectors based at least in part on the said one or more candidate keyword strings, each bit of the said one or bit vector corresponding to one or more symbols in an alphabet, bits having a bit position corresponding to a symbol of a prefix of a word in the said one or more candidate keyword strings being set, the said one or more bit vectors for use in comparing an input bit vector with the said one or more bit vectors to indicate whether an input keyword string represented by the said input bit vector matches the said one or more candidate keyword strings; and

means for storing the said one or more bit vectors and a reference to the said one or more candidate keyword strings in the said database.

160. (Currently Amended) An apparatus for incremental keyword search on a wireless user device, the apparatus comprising:

means for receiving from a user of the said wireless user device an input keyword string comprising one or more words comprising one or more symbols;

means for creating a bit vector based at least in part on the said input keyword string, each bit corresponding to one or more symbols in an alphabet, bits having a bit position corresponding to a prefix of a word in the said one or more symbols being set;

means for comparing the said bit vector with one or more other bit vectors representing at least one candidate keyword string to create a set of matching bit vectors;

means for applying a conventional keyword matching algorithm to the said at least one

candidate keyword string represented by the said set of matching bit vectors; and

means for presenting any matching candidate keyword strings.

161.   (Currently Amended) The apparatus of claim 160, further comprising means for

preempting the said the said receiving, the said creating, the said comparing, the said

applying and the said presenting after a predetermined amount of time.

162.   (Currently Amended) The apparatus of claim 161 wherein the said predetermined

amount of time is two seconds.

163.   (Currently Amended) The apparatus of claim 160 wherein the said comparing is

independent of the order of keyword prefixes in keyword strings.

164.   (Currently Amended) An apparatus for incremental keyword search on a wireless user

device, the apparatus comprising:

means for receiving from a user of the said wireless user device an input keyword string

comprising one or more words comprising one or more symbols, each symbol

representing the first symbol of a word in a search string;

means for receiving a hierarchy, elements of the said hierarchy comprising intermediate

nodes and leaf nodes representing one or more keyword strings comprising one or more

words comprising one or more symbols;

means for creating hierarchy bit vectors corresponding to the said one or more keyword

strings in the said hierarchy;

means for searching the said hierarchy bit vectors for a match with the said input keyword

string, the said means for searching comprising, for each of the said elements of the said

hierarchy:

means for saving the said input keyword string;

means for applying a logical "AND" operation to the bit vector of the element and a bit

vector based at least in part on the said input keyword string, the said applying

producing a result;

means for if the said result is nonzero, removing from the said input keyword string any

words in the said input keyword string that are prefixes of words in the element;

means for if the said input keyword string is empty, adding the said element to a list of

matched items; and

means for restoring the said input keyword string; and

means for rendering the said list of matched items.

165.   (Currently Amended) An apparatus for creating a keyword string database on a wireless

user device, the apparatus comprising:

a memory for storing the said keyword string database; and

a processor configured to:

determine one or more candidate keyword strings to store in the said database;

for each of the said one or more candidate keyword strings, create a single bit vector based

at least in part on the said each of the said one or more candidate keyword strings, the

said bit vectors for use in comparing an input bit vector with the said bit vectors to

indicate whether an input keyword string represented by the said input bit vector

matches the said one or more candidate keyword strings, the said input keyword string

provided by a user of the said wireless user device; and

store the said one or more bit vectors and a reference to the said one or more candidate

keyword strings in the said database.

166.   (Currently Amended) The apparatus of claim 165 wherein the said bit vector further

comprises at least one bit that represents a non-alphanumeric symbol.

167.   (Currently Amended) The apparatus of claim 166 wherein the said non-alphanumeric

symbol indicates an email address.

168.   (Currently Amended) The apparatus of claim 166 wherein the said non-alphanumeric

symbol indicates a mobile number.

169.   (Currently Amended) The apparatus of claim 166 wherein the said non-alphanumeric

symbol indicates a wired number.

170.   (Currently Amended) The apparatus of claim 166 wherein the said non-alphanumeric

symbol indicates a paper-mail address.

171.   (Currently Amended) The apparatus of claim 166 wherein the said non-alphanumeric

symbol indicates a cost ranking.

172.   (Currently Amended) The apparatus of claim 166 wherein the said non-alphanumeric

symbol indicates a quality ranking.

173.   (Currently Amended) The apparatus of claim 166 wherein the said non-alphanumeric symbol indicates a cuisine.

174.   (Currently Amended) An apparatus for incremental keyword search on a wireless user device, the apparatus comprising:

a user interface configured to receive from a user of the said wireless user device an input keyword string comprising one or more words comprising one or more symbols, the said user interface further configured to present any matching keyword strings; and

a search engine in communication with the said user interface and configured to:

create a single bit vector based at least in part on the said input keyword string;

compare the said bit vector with one or more other bit vectors representing at least one candidate keyword string to create a set of matching bit vectors; and

apply a conventional keyword matching algorithm to the said at least one candidate keyword string represented by the said set of matching bit vectors.

175.   (Currently Amended) The apparatus of claim 174 wherein the said apparatus is further configured to preempt the said search engine after a predetermined amount of time.

176.   (Currently Amended) The apparatus of claim 175 wherein the said predetermined amount of time is two seconds.

177.   (Currently Amended) The apparatus of claim 174 wherein the said apparatus is further configured to compare the said bit vector independent of the order of keyword prefixes in keyword strings.

178.   (Currently Amended) An apparatus for creating a keyword string database on a wireless

user device, the apparatus comprising:

a memory for storing the said keyword string database; and

a processor configured to:

determine one or more candidate keyword strings to store in the said database;

for each of the said one or more candidate keyword strings, create a single bit vector based

at least in part on the said each of the said one or more candidate keyword strings, the

said bit vector having a bit position for each symbol in an alphabet and having bits set

for bit positions corresponding to at least one symbol representing the first symbol of a

word in the said each of the said one or more candidate keyword strings, the said bit

vectors for use in comparing an input bit vector with the said bit vectors to indicate

whether an input keyword string represented by the said input bit vector matches the

said one or more candidate keyword strings; and

store the said one or more bit vectors and a reference to the said one or more candidate

keyword strings in the said database.

179.   (Currently Amended) An apparatus for incremental keyword search on a wireless user

device, the apparatus comprising:

a user interface configured to receive from a user of the said wireless user device an input

keyword string comprising one or more words comprising one or more symbols, the

said user interface further configured to present any matching keyword strings; and

a search engine in communication with the said user interface and configured to:

create a single bit vector based at least in part on the said input keyword string, the said bit

vector having a bit position for each symbol in an alphabet and having bits set for

positions corresponding to at least one symbol representing the first symbol of a word in

the ~~said~~ input keyword string;

compare the ~~said~~ bit vector with one or more other bit vectors representing at least one

candidate keyword string to create a set of matching bit vectors; and

apply a conventional keyword matching algorithm to the ~~said~~ at least one candidate keyword

string represented by the ~~said~~ set of matching bit vectors.

180.   (Currently Amended) The apparatus of claim 179 wherein the ~~said~~ apparatus is further

configured to preempt the ~~said~~ search engine after a predetermined amount of time.

181.   (Currently Amended) The apparatus of claim 180 wherein the ~~said~~ predetermined

amount of time is two seconds.

182.   (Currently Amended) The apparatus of claim 179 wherein the ~~said~~ apparatus is further

configured to compare the ~~said~~ bit vector independent of the order of keyword prefixes in

keyword strings.

183.   (Currently Amended) An apparatus for comparing keyword strings on a wireless user

device, the apparatus comprising:

a memory for storing at least one relative frequency of use for at least one symbol in a

language; and

a processor configured to:

determine a relative frequency of use for at least one symbol in a language;

assign a statistical weighting to the ~~said~~ at least one symbol based at least in part on a

relative frequency of use of the ~~said~~ at least one symbol;

assign each of the ~~said~~ at least one symbol to one of a plurality of groups; and

compare a first keyword string and a second keyword string based at least in part on whether at least one symbol of the ~~said~~ first keyword string is assigned to the same group as at least one corresponding symbol of the ~~said~~ second keyword string.

184.   (Currently Amended) The apparatus of claim 183 wherein the ~~said~~ processor is further configured to assign each of the ~~said~~ at least one symbol to one of a plurality of groups so as to minimize the difference between the sums of statistical weightings for symbols comprising each group in the ~~said~~ plurality of groups.

185.   (Currently Amended) The apparatus of claim 183 wherein the ~~said~~ relative frequency of use comprises the relative frequency of use of symbols in the first character of words in the ~~said~~ language.

186.   (Currently Amended) An apparatus for creating a keyword string database on a wireless user device, the apparatus comprising:

a memory for storing the ~~said~~ keyword string database; and

a processor configured to:

determine one or more candidate keyword strings to store in the ~~said~~ database;

create one or more bit vectors based at least in part on the ~~said~~ one or more candidate keyword strings, each bit of the ~~said~~ one or more bit vectors corresponding to one or more symbols in an alphabet, bits having a bit position corresponding to the first symbol of a word in the ~~said~~ one or more candidate keyword strings being set, the ~~said~~ one or more bit vectors for use in comparing an input bit vector with the ~~said~~ one or

more bit vectors to indicate whether an input keyword string represented by the said

input bit vector matches the said one or more candidate keyword strings; and

store the said one or more bit vectors and a reference to the said one or more candidate

keyword strings in the said database.

187.   (Currently Amended) An apparatus for incremental keyword search on a wireless user

device, the apparatus comprising:

a user interface configured to receive from a user of the said wireless user device an input

keyword string comprising one or more words comprising one or more symbols, each

symbol representing the first symbol of a word in a search string, the said user interface

further configured to present any matching keyword strings; and

a search engine in communication with the said user interface and configured to:

create a single bit vector based at least in part on the said input keyword string, each bit

corresponding to one or more symbols in an alphabet, bits having a bit position

corresponding to the said one or more symbols being set;

compare the said bit vector with one or more other bit vectors representing at least one

candidate keyword string to create a set of matching bit vectors; and

apply a conventional keyword matching algorithm to the said at least one candidate keyword

string represented by the said set of matching bit vectors.

188.   (Currently Amended) The apparatus of claim 187 wherein the said apparatus is further

configured to preempt the said search engine after a predetermined amount of time.

189.   (Currently Amended) The apparatus of claim 188 wherein the said predetermined

amount of time is two seconds.

190.   (Currently Amended) The apparatus of claim 187 wherein the said apparatus is further

configured to compare the said bit vector independent of the order of keyword prefixes in

keyword strings.

191.   (Currently Amended) An apparatus for creating a keyword string database on a wireless

user device, the apparatus comprising:

a memory for storing the said keyword string database; and

a processor configured to:

determine one or more candidate keyword strings to store in the said database;

create one or more bit vectors based at least in part on the said one or more candidate

keyword strings, each bit of the said one or bit vector corresponding to one or more

symbols in an alphabet, bits having a bit position corresponding to a symbol of a prefix

of a word in the said one or more candidate keyword strings being set, the said one or

more bit vectors for use in comparing an input bit vector with the said one or more bit

vectors to indicate whether an input keyword string represented by the said input bit

vector matches the said one or more candidate keyword strings; and

store the said one or more bit vectors and a reference to the said one or more candidate

keyword strings in the said database.

192.   (Currently Amended) An apparatus for incremental keyword search on a wireless user

device, the apparatus comprising:

a user interface configured to receive from a user of the said wireless user device an input

keyword string comprising one or more words comprising one or more symbols, the

said user interface further configured to present any matching keyword strings; and

a search engine in communication with the ~~said~~ user interface and configured to:

create a bit vector based at least in part on the ~~said~~ input keyword string, each bit

corresponding to one or more symbols in an alphabet, bits having a bit position

corresponding to a prefix of a word in the ~~said~~ one or more symbols being set;

compare the ~~said~~ bit vector with one or more other bit vectors representing at least one

candidate keyword string to create a set of matching bit vectors; and

apply a conventional keyword matching algorithm to the ~~said~~ at least one candidate keyword

string represented by the ~~said~~ set of matching bit vectors.

193.   (Currently Amended) The apparatus of claim 192 wherein the ~~said~~ apparatus is further

configured to preempt the ~~said~~ search engine after a predetermined amount of time.

194.   (Currently Amended) The apparatus of claim 193 wherein the ~~said~~ predetermined

amount of time is two seconds.

195.   (Currently Amended) The apparatus of claim 192 wherein the ~~said~~ apparatus is further

configured to compare the ~~said~~ bit vector independent of the order of keyword prefixes in

keyword strings.

196.   (Currently Amended) An apparatus for incremental keyword search on a wireless user

device, the apparatus comprising:

a user interface configured to receive from a user of the ~~said~~ wireless user device an input

keyword string comprising one or more words comprising one or more symbols, the

~~said~~ user interface further configured to present any matching keyword strings; and

a search engine in communication with the ~~said~~ user interface and configured to:

receive an input keyword string comprising one or more words comprising one or more

symbols, each symbol representing the first symbol of a word in a search string;

receive a hierarchy, elements of the ~~said~~ hierarchy comprising intermediate nodes and leaf

nodes representing one or more keyword strings comprising one or more words

comprising one or more symbols;

create hierarchy bit vectors corresponding to the ~~said~~ one or more keyword strings in the

~~said~~ hierarchy;

search the ~~said~~ hierarchy bit vectors for a match with the ~~said~~ input keyword string, the ~~said~~

apparatus further configured to, for each of the ~~said~~ elements of the ~~said~~ hierarchy:

save the ~~said~~ input keyword string;

apply a logical "AND" operation to the bit vector of the element and a bit vector based at

least in part on the ~~said~~ input keyword string, the ~~said~~ applying producing a result;

if the ~~said~~ result is nonzero, remove from the ~~said~~ input keyword string any words in the ~~said~~

input keyword string that are prefixes of words in the element;

if the ~~said~~ input keyword string is empty, add the ~~said~~ element to a list of matched items; and

restoring the ~~said~~ input keyword string; and

render the ~~said~~ list of matched items; and

apply a conventional keyword matching algorithm to the ~~said~~ at least one keyword string

represented by one or more element in the ~~said~~ list of matched items.

197.   (Currently Amended) A method for comparing keyword strings on a wireless user

device, the method comprising:

assigning each of at least one symbol in a language to one of a plurality of groups; ~~and~~

comparing a first keyword string and a second keyword string based at least in part on

whether at least one symbol of the said first keyword string is assigned to the same

group as at least one corresponding symbol of the said second keyword string; and

presenting a result of the comparing to a user of the wireless user device.

198. (Currently Amended) The method of claim 197 wherein the said plurality of groups

corresponds with a telephone keyboard symbol grouping.

199. (Currently Amended) A method for comparing keyword strings on a wireless user

device, the method comprising:

step for assigning each of at least one symbol in a language to one of a plurality of groups;

and

step for comparing a first keyword string and a second keyword string based at least in part

on whether at least one symbol of the said first keyword string is assigned to the same

group as at least one corresponding symbol of the said second keyword string; and

step for presenting a result of the comparing to a user of the wireless user device.

200. (Currently Amended) The method of claim 199 wherein the said plurality of groups

corresponds with a telephone keyboard symbol grouping.

201. (Currently Amended) A program storage device readable by a machine, embodying a

program of instructions executable by the machine to perform a method for comparing

keyword strings on a wireless user device, the method comprising:

assigning each of at least one symbol in a language to one of a plurality of groups; and

comparing a first keyword string and a second keyword string based at least in part on

whether at least one symbol of the said first keyword string is assigned to the same

group as at least one corresponding symbol of the said second keyword string.

202.   (Currently Amended) The program storage device of claim 201 wherein the said

plurality of groups corresponds with a telephone keyboard symbol grouping.

203.   (Currently Amended) An apparatus for comparing keyword strings on a wireless user

device, the apparatus comprising:

means for assigning each of at least one symbol in a language to one of a plurality of groups;

and

means for comparing a first keyword string and a second keyword string based at least in

part on whether at least one symbol of the said first keyword string is assigned to the

same group as at least one corresponding symbol of the said second keyword string.

204.   (Currently Amended) The apparatus of claim 203 wherein the said plurality of groups

corresponds with a telephone keyboard symbol grouping.

205.   (Currently Amended) An apparatus for comparing keyword strings on a wireless user

device, the apparatus comprising:

a memory for storing the said keyword strings; and

a processor configured to:

assign each of at least one symbol in a language to one of a plurality of groups; and

compare a first keyword string and a second keyword string based at least in part on whether

at least one symbol of the said first keyword string is assigned to the same group as at

least one corresponding symbol of the said second keyword string.

206.   (Currently Amended) The apparatus of claim 205 wherein the said plurality of groups

corresponds with a telephone keyboard symbol grouping.